AMENDMENTS TO THE CLAIMS:

Claim 1. (Previously presented) A method for storing a semantic object derived from geological seismic survey data, the method comprising:

summarizing attributes of said semantic object;

indexing the summary of attributes; and

storing the summary of attributes and the index of the summary of attributes, wherein said summary of attributes comprises one of a slice label, a signal strength, and a coordinate of a surveyed segment.

Claim 2. (Original) The method of claim 1, wherein the semantic object comprises a summary representation of raw data measurements.

Claim 3. (Original) The method of claim 1, further comprising searching a database of a plurality of indexed attributes of semantic objects.

Claim 4. (Original) The method of claim 3, further comprising searching the index of the plurality of semantic object attributes to identify a semantic object having attributes that match a query and retrieving the identified semantic object.

Claim 5. (Original) The method of claim 3, wherein an optimizing mechanism is used in searching to optimize the process of searching.

Claim 6. (Original) The method of claim 1, wherein the semantic object represents a model of a phenomena of interest that is measured by a collection of data which exceeds a data size that is accessible with a predetermined efficiency by multiple simultaneous users.

Claim 7. (Canceled).

Claim 8. (Original) The method of claim 1, wherein the index of the summary of attributes

comprises a plurality of key features that have been resolved into a set of data points and summary statistics.

Claim 9. (Original) The method of claim 1, wherein the summary of attributes comprises one of a confidence level, summary statistics and a compact approximation.

Claim 10. (Original) The method of claim 9, wherein the compact approximation comprises a multiple segment polyline.

Claim 11. (Original) The method of claim 10, wherein each segment of the multiple segment polyline comprises a best fit line having end point coordinates and a slope.

Claim 12. (Original) The method of claim 9, wherein the confidence level represents a degree of accuracy of classification for the semantic object.

Claim 13. (Original) A method of deploying computer infrastructure, comprising integrating computer-readable code into a computing system, wherein the code in combination with the computing system is capable of performing the method of claim 1.

Claim 14. (Currently amended) A program embodied in a computer readable medium ~~signal-bearing medium tangibly embodying a program of machine-readable instructions~~ executable by a digital processor, the program comprising:

instructions for summarizing attributes of a semantic object derived from geological seismic survey data;

instructions for indexing the summary of attributes; and

instructions for storing the summary of attributes and the index of the summary of attributes, wherein said summary of attributes comprises one of a slice label, a signal strength, and a coordinate of a surveyed segment.

Claim 15. (Currently amended) The program ~~signal-bearing medium~~ of claim 14, wherein the semantic object comprises a summary representation of raw data measurements.

Claim 16. (Currently amended) The program ~~signal-bearing medium~~ of claim 14, further comprising instructions for searching a database of a plurality of indexed attributes of semantic objects.

Claim 17. (Currently amended) The program ~~signal-bearing medium~~ of claim 16, further comprising instructions for searching the index of the plurality of semantic object attributes to identify a semantic object having attributes that match a query and retrieving the identified semantic object.

Claim 18. (Currently amended) The program ~~signal-bearing medium~~ of claim 16, wherein an optimizing mechanism is used in searching to optimize the process of searching.

Claim 19. (Currently amended) The program ~~signal-bearing medium~~ of claim 14, wherein the semantic object represents a model of a phenomena of interest that is measured by a collection of data which exceeds a data size that is accesible with a predetermined efficiency by multiple simultaneous users.

Claim 20. (Canceled).

Claim 21. (Currently amended) The program ~~signal-bearing medium~~ of claim 14, wherein the index of the summary of attributes comprises a plurality of key features that have been resolved into a set of data points and summary statistics

Claim 22. (Currently amended) The program ~~signal-bearing medium~~ of claim 14, wherein the summary of attributes comprises one of a confidence level, summary statistics and a compact approximation.

Claim 23. (Currently amended) The program ~~signal bearing medium~~ of claim 22, wherein the compact approximation comprises a multiple segment polyline.

Claim 24. (Currently amended) The program ~~signal bearing medium~~ of claim 23, wherein each segment of the multiple segment polyline comprises a best fit line having end point coordinates and a slope.

Claim 25. (Currently amended) The program ~~signal bearing medium~~ of claim 22, wherein the confidence level represents a degree of accuracy of classification for the semantic object.

Claim 26. (Previously presented) A system for storing a semantic object, the system comprising:

a semantic object summarizer that summarizes attributes of a semantic object derived from geological seismic survey data;

an indexer that indexes the summarized attributes; and

a database that stores the summary of attributes and the index of the summary of attributes, wherein said summary of attributes comprises one of a slice label, a signal strength, and a coordinate of a surveyed segment.

Claim 27. (Original) The system of claim 26, wherein the semantic object comprises a summary representation of raw data measurements.

Claim 28. (Original) The system of claim 26, further comprising a searching device that searches the database of a plurality of indexed attributes of semantic objects.

Claim 29. (Original) The system of claim 26, further comprising a searching device that searches the index of the plurality of semantic object attributes to identify a semantic object having attributes that match a query and retrieving the identified semantic object.

Claim 30. (Original) The system of claim 28, wherein said searching device comprises an optimizing mechanism that optimizes the process of searching.

Claim 31. (Original) The system of claim 26, wherein the semantic object represents a model of a phenomena of interest that is measured by a collection of data which exceeds a data size that is accessible with a predetermined efficiency by multiple simultaneous users.

Claim 32. (Canceled).

Claim 33. (Original) The system of claim 26, wherein the index of the summary of attributes comprises a plurality of key features that have been resolved into a set of data points and summary statistics.

Claim 34. (Original) The system of claim 26, wherein the summary of attributes comprises one of a confidence level, summary statistics and a compact approximation.

Claim 35. (Original) The system of claim 34, wherein the compact approximation comprises a multiple segment polyline.

Claim 36. (Original) The system of claim 35, wherein each segment of the multiple segment polyline comprises a best fit line having end point coordinates and a slope.

Claim 37. (Original) The system of claim 34, wherein the confidence level represents a degree of accuracy of classification for the semantic object.